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(21) International Application Number: PCT/GB99/03081 (22) International Filing Date: 14 September 1999 (14.09.99) (30) Priority Data: 98307434.5 14 September 1998 (14.09.98) EP (71) Applicants (for all designated States except US): ASTON UNIVERSITY [GB/GB]; Aston Triangle, Birmingham, West Midlands B4 7ET (GB). AMERSHAM PHARMACIA BIOTECH UK LIMITED [GB/GB]; Amersham Place, Little Chalfont, Buckinghamshire HP7 9NA (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): HINE, Anna, Victoria [GB/GB]; Bracebridge House, 139 Chester Road South, Kiddleminster, Worcestershire DY10 1XB (GB). MORGAN, Leonie, Jane [GB/GB]; 197 Litchfield Street, Fazely Tamworth, Staffordshire B78 3QF (GB). SANTOS, Albert, Francis [GB/GB]; Llwynceilyn, Cefn Bychan, Pentyrch, Cardiff, Mid Glamorgan CF15 9PG (GB). PALFREY, David [GB/GB]; 110 George Street, New Arley, Nuneaton, Warwickshire CV7 8GP (GB).		(74) Agents: PENNANT, Pyers et al.; Stevens Hewlett & Perkins, 1 Serjeants' Inn, Fleet Street, London, Greater London EC4Y 1NT (GB). (81) Designated States: CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: GENE AND PROTEIN LIBRARIES AND METHODS RELATING THERETO (57) Abstract A set of libraries of proteins, which proteins are capable of specific binding interactions by virtue of amino acid residues at two or more determined positions including a first determined position and one or more other determined positions, which set of libraries consists of: a) 6 to 20 libraries in which each library has one or several but less than 20 amino acid residues at the said first determined position and is randomised at the said one or more other determined positions, the arrangement being such that interaction of the 6 to 20 libraries with a specific binding partner identifies an amino acid residue at the said first determined position that takes part in the specific binding interaction, and b) 6 to 20 libraries of corresponding design for each of the said one or more other determined positions. A set of libraries of genes which code for the proteins. A method of identifying a protein which interacts with a specific binding partner, which method comprises incubating the protein with each library of the set of libraries of proteins, observing specific binding interactions with certain libraries of the set, and using the observations to identify a protein which interacts with the specific binding partner. A method of making a library of randomised genes.		